

## *Revised Final Agenda*

**TBPOC MEETING**  
**August 12, 2013, 11:00am – 1:00pm**  
**1120 N Street, CTC Conference Room, Sacramento**

Topic	Presenter	Time	Desired Outcome
<b>1. CHAIR'S REPORT</b>	S. Heminger, BATA		Information
<b>2. CONSENT CALENDAR</b>			
a. TBPOC Meeting Minutes	A. Fremier, BATA		Approval
1. July 10, 2013 Meeting Minutes*			
b. Contract Change Orders (CCOs)	D. Noel, CTC		Approval
1. CCO 87-So, Oakland Touchdown 2 (OTD2) Mainline Roadway Modifications during Full Bridge Closure*			
2. CCO 88-So, Oakland Touchdown 2 (OTD2) Extended Full Bridge Closure, Closure Traffic Control and Support Costs*			
<b>3. PROGRESS REPORTS</b>			
a. 2013 Second Quarter Project Progress and Financial Update*	A. Fremier, BATA		Approval
<b>4. SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES</b>			
a. Seismic Safety Opening Status*	PMT	30 min	Information
1. New East Span Opening Announcement – Media and Legislative Strategy*	A. Gordon, PIO	15 min	Information
b. Corridor Update/Schedule*	T. Anziano, CT	15 min	Information
c. E2 Update*	B. Casey, CT	15 min	Information
1. CCO Update*			
2. Testing Budget Update*			
d. Risk Matrix***	T. Anziano, CT	15 min	Information
<b>5. OTHER BUSINESS</b>			
<b>Next TBPOC Conference Call: August 22, 2013, 10:00am – 11:00am</b>			

\* Attachments

\*\* Attachments at front of binder

\*\*\* Attachments to be sent under separate cover

## **ITEM 1: CHAIR'S REPORT**

**No Attachments**

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** August 7, 2013

**FR:** Andrew Fremier, Deputy Executive Director, Operations, BATA/MTC

**RE:** Agenda No. - 2a1  
Consent Calendar  
Item- TBPOC Meeting Minutes  
July 10, 2013 Meeting Minutes

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**Recommendation:**  
**APPROVAL**

**Cost:**  
N/A

**Schedule Impacts:**  
N/A

**Discussion:**  
The Program Management Team has reviewed and requests TBPOC approval of the July 10, 2013 Meeting Minutes.

**Attachment(s):**  
July 10, 2013 Meeting Minutes



# TOLL BRIDGE PROGRAM OVERSIGHT COMMITTEE

CALTRANS BAY AREA TOLL AUTHORITY CALIFORNIA TRANSPORTATION COMMISSION

## TBPOC MEETING MINUTES

July 10, 2013, 12:30pm – 3:30pm

MTC/BATA, 101 Eighth Street, Oakland, CA

TBPOC/PMT pre-briefing (Executive Conf Rm): 12:30pm – 1:30pm

TBPOC meeting (The Claremont): 1:30pm – 3:30pm

**Attendees:** TBPOC Members: Steve Heminger (Chair), Andre Boutros, and Malcolm Dougherty  
PMT Members: Tony Anziano, Andrew Fremier, and Stephen Maller  
Participants: Bill Casey, Michele DiFrancia, Rich Foley, Ted Hall, Rob Kobal, Beatriz Lacson, Richard Land, Peter Lee, Dina Noel, Bijan Sartipi, Saeed Shahmirzai, Ken Terpstra, Chris Traina, Deanna Vilchek, and Mazen Wahbeh

Convened: 2:46 PM

Items		Action
1.	<b>CHAIR'S REPORT</b> <ul style="list-style-type: none"><li>The Chair referred to the East Span troll mentioned at this morning's public hearing, assuring it will have a home after seismic safety opening (SSO).</li></ul>	<ul style="list-style-type: none"><li>The PMT to draft a white paper on the troll.</li></ul>
2.	<b>CONSENT CALENDAR</b> <ul style="list-style-type: none"><li>a. TBPOC Meeting Minutes<ul style="list-style-type: none"><li>1. June 6, 2013 Meeting Minutes</li></ul></li><li>b. Contract Change Orders (CCOs)<ul style="list-style-type: none"><li>1. CCO 197-S0 (YBITS1), Polyester Concrete Overlay at West Tie-In, \$1,779,919.00</li></ul></li></ul>	<ul style="list-style-type: none"><li>The TBPOC <b>APPROVED</b> the Consent Calendar, as presented.</li></ul>
3.	<b>PROGRESS REPORTS</b> <ul style="list-style-type: none"><li>a. Project Progress and Financial Update June 2013<ul style="list-style-type: none"><li>P. Lee noted that the June 2013 monthly report was approved by the PMT under a TBPOC-delegated authority, and was distributed at this morning's BATA Oversight Committee meeting.</li></ul></li></ul>	
4.	<b>PROGRAM ISSUES</b> <ul style="list-style-type: none"><li>a. Gateway Park Updated Park Plan,</li></ul>	

(Continued)

Items	Action
<p>Capital Costs and Phasing</p> <ul style="list-style-type: none"> <li>• A. Fremier reported on the updated and phased Gateway Park concept, referring to the Phase 1 Construction Cost Estimate table and goal to keep total costs around \$100M.</li> <li>○ TBPOC approval to schedule a meeting with the East Bay Regional Parks District (EBRPD) before going public was requested. <ul style="list-style-type: none"> <li>➤ The EBRPD wants to address concerns about its role and responsibilities (O&amp;M) in the park.</li> </ul> </li> <li>○ Discussion items included: environmental requirements; EBRPD role; basic park elements; potential funding.</li> </ul>	<ul style="list-style-type: none"> <li>• The TBPOC <b>APPROVED</b> a meeting of the three agencies (BATA/CT/CTC) with the EBRPD.</li> </ul>
<p>5. <b>SAN FRANCISCO-OAKLAND BAY BRIDGE UPDATES</b></p> <p>a. E2 Update</p> <ol style="list-style-type: none"> <li>1. E2 Budget <ul style="list-style-type: none"> <li>• T. Anziano presented, for TBPOC approval, a Shear Key S1 and S2 anchorage budget authorization request of \$7,500,000 to increase the overall budget to \$15,000,000—previous budget authorizations of \$4,300,000 and \$3,200,000 were approved by the TBPOC on May 9, 2013 and June 6, 2013, respectively.</li> <li>○ B. Casey indicated that this is what is required for now, but that the work is still evolving (supplemental CCOs anticipated).</li> <li>○ The TBPOC agreed to increase the overall budget authorization request to \$23,000,000, to include \$18,000,000 for capital outlay (CO) costs and \$5,000,000 for capital outlay support (COS) costs (does not include testing).</li> </ul> </li> <li>2. E2 CCOs <ul style="list-style-type: none"> <li>• T. Anziano presented, for TBPOC approval, the following SAS CCOs</li> </ul> </li> </ol>	<ul style="list-style-type: none"> <li>• The TBPOC <b>APPROVED</b> an overall budget authorization request of \$23,000,000 (\$18,000,000 CO + \$5,000,000 COS), as discussed.</li> <li>• The TBPOC <b>APPROVED</b> CCOs 313, 319, 320, 325, 326, 327, 328,</li> </ul>

**(Continued)**

Items	Action
<p>for the Pier E2 Shear Key S1 and S2 anchor rod replacement solution, with the corresponding not-to-exceed amounts:  CCO 313, Shear Key Materials, \$1,500,000  CCO 319, Fabricate Saddles, \$5,000,000  CCO 320, Temporary Bearing Shimming, \$100,000  CCO 325, Concrete Demolition, \$750,000  CCO 326, Concrete Coring, \$500,000  CCO 327, ABFJV Field/Support Work, \$3,400,000  CCO 328, Furnish &amp; Place Bar Reinforcing Steel, \$675,000  CCO 329, Form, Furnish, &amp; Place Concrete, \$1,300,000  CCO 330, Furnish &amp; Install Post-Tensioning System, \$1,000,000  CCO 331, Repository for Plan Sheets, \$0  Total: Not to exceed \$14,225,000</p> <ul style="list-style-type: none"> <li>○ Should the Contractor not sign these CCOs, staff to issue unilateral CCOs to provide a payment mechanism for work performed while the Contract Settlement Report (CSR) is pending. <ul style="list-style-type: none"> <li>➤ The TBPOC agreed that the statement regarding contractual obligations and the following language should be removed from all the CCOs:  "The Contractor will plan and execute the Work outlined in this Contract Change Order with the intent to achieve "Readiness for Seismic Safety Opening" on or before August 28, 2013; however the</li> </ul> </li> </ul>	<p>329, 330, and 331, for a total amount not to exceed \$14,225,000, as requested; and deletion of the CCO 160-related language and statement regarding contractual obligations from the CCOs, as discussed.</p>

**(Continued)**

Items	Action
<p>performance and subsequent completion of Work in this Contract Change Order is deemed not to be a required condition for the Contractor to have achieved "Readiness for Seismic Safety Opening" as defined in Contract Change Order No. 160."</p> <ul style="list-style-type: none"><li>○ Discussion items included: CSR language in CCOs; effect of non-payment for work done; risk analysis.</li></ul> <p>b. Corridor Update/Schedule</p> <ul style="list-style-type: none"><li>• In response to the Chair's query, T. Anziano indicated that absent the shear key bolt problems the Contractor is two weeks ahead of schedule—with SSO on track for August 14, 2013.</li><li>○ B. Casey provided an update on the SFOBB bike path.</li></ul> <p>c. Bridge Safety and Security</p> <ul style="list-style-type: none"><li>• R. Kobal reported on the Department implementation of identified responses to the California Bridge Assault Advisory Panel recommendation to secure the bridge, as addressed in the CHP Security Vulnerability Assessment (SVA). He summarized the status based on a Labor Day SSO.</li><li>○ Discussion items included: number of cameras installed by SSO; potential default gates for SSO; new set of protocols for bridge access; bike path operations overview, bike group and BCDC concurrence; sign details, Alex Zuckerman sign.</li></ul> <p>d. Mechanical, Electrical and Piping (MEP) System Update</p> <ul style="list-style-type: none"><li>• S. Shahmirzai presented a comprehensive report on the status of the SFOBB MEP systems, including</li></ul>	<ul style="list-style-type: none"><li>• Staff to present at the next TBPOC meeting a punchlist of SSO items contained in CCO 160; and hold a TBPOC walk-thru after the meeting.</li></ul>

**(Continued)**

Items	Action
<ul style="list-style-type: none"><li>MEP integration strategy and goals.</li><li>Discussion items included: what the approved budget includes; contracting mechanism; status of light pole vibrations; achieving 100% completion.</li></ul>	<ul style="list-style-type: none"><li>Staff to provide an update on the light pole vibrations at the next TBPOC meeting.</li></ul>
<p><b>6. OTHER BUSINESS</b></p> <p>a. TBPOC August 1, 2013 Meeting Reschedule</p> <ul style="list-style-type: none"><li>The Chair and M. Dougherty indicated that they will not be available for the TBPOC August 1 meeting.</li></ul> <p><u>BATA OC Meeting Follow-up</u></p> <ul style="list-style-type: none"><li>The Chair referred to the Design JV shim document that Dr. F. Seible held up at this morning's BATA OC meeting.</li><li>The Chair noted that expectation was built today; now comes the vetting process and the results of that; the PMT to take actions as shown.</li></ul>	<ul style="list-style-type: none"><li>Staff to schedule a two-hour TBPOC conference call before July 26, 2013, in lieu of an August 1 meeting.</li></ul> <p>The TBPOC tasked the PMT to:</p> <ol style="list-style-type: none"><li>1) obtain a copy of the shim document for in-house review;</li><li>2) request FHWA review of the document; and</li><li>3) decide who to bring in to provide a third review.</li></ol>

Adjourned: 4:07 PM

### **TBPOC MEETING MINUTES**

July 10, 2013, 1:30pm – 3:30pm

#### **APPROVED BY:**

\_\_\_\_\_  
**STEVE HEMINGER**, TBPOC Chair  
Executive Director, Bay Area Toll Authority

\_\_\_\_\_  
Date

\_\_\_\_\_  
**ANDRE BOUTROS**,  
Executive Director, California Transportation Commission

\_\_\_\_\_  
Date

\_\_\_\_\_  
**MALCOLM DOUGHERTY**  
Director, California Department of Transportation

\_\_\_\_\_  
Date

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** August 7, 2013

**FR:** Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

**RE:** Agenda No. - 2b1

Item- Consent Calendar – Contract Change Orders (CCOs)  
Oakland Touchdown 2 (OTD2) CCO 87-S0 – Mainline Roadway  
Modifications during Full Bridge Closure

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**Recommendation:**

**APPROVAL**

**Cost:**

Not to Exceed \$1,800,000.00

**Schedule Impacts:**

NA

**Discussion:**

**CCO 87-S0 in the not-to-exceed amount of \$1,800,000.00** will provide for modifications to the mainline freeway being constructed during the full closure of the SFOBB.

The modifications to the westbound mainline are needed to complete a 200-meter gap between two contracts: the OTD2 and the BATA Toll Plaza contracts. The major work includes extending the hot mix asphalt overlay by 200 meters. The changes to the eastbound roadway are needed to conform to the existing Detour roadway grade which was not accounted for in the plan details.

In general, the additional scope of work includes grinding 15,000 square meters of the existing asphalt roadway, excavating 1,500 cubic meters of asphalt and soil, placing 1,800 metric tons of hot mix asphalt and installing 1,100 meters of temporary K-rail. All work shall be performed during the full bridge closure.

## *Memorandum*

### Risk Management:

The OTD2 risk register includes Risk Id #25 Design Evolution to address changes to the OTD2 contract as a result of the temporary bike path. The cost of this change falls within the \$1 million to \$5 million range contemplated for this risk.

### **Attachment(s):**

1. Draft CCO N0. 87-S0
2. Draft CCO No. 87-S0 Memorandum

**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

<b>CCO 87</b>	<b>Suppl. No. 0</b>	<b>Contract No. 04 - 0120M4</b>	<b>Road 04-ALA-80-1.6/2.7</b>	<b>FED. AID LOC.: NO FED AID</b>
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**To: FLATIRON WEST INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the Engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Incorporate the following changes into Stage 2 of the stage construction plans:

- 1) Extend the westbound mainline paving limits to W Line Sta. 96+11 as shown on Page No. 3 of this change over. The extended paving will consist of cold plane 30 mm of existing AC pavement and place a 30 mm HMA (OG).
- 2) Modify the eastbound mainline roadway section from E Line Sta. 89+20 to 92+30 as shown on Page No. 4 of this change order.
- 3) Place Temporary Railing (Type K) in Stage 2 at the locations listed below in lieu of constructing the permanent Concrete Barrier (Type S & Type SC). Construction of the permanent concrete barrier shall be performed in Stage 3.
  - a) Rt of W Line Sta. 90+60 to 92+73
  - b) Lt of E Line Sta. 89+60 to 92+27
  - c) Rt Of E Line Sta. 90+20 to 94+80

**Estimate of Increase in Contract Item at Contract Price:**

Item No. 28: TEMPORARY RAILING (TYPE K)			
1100 M	(+261.90%)	/M	=
Item No. 29: TEMPORARY TRAFFIC SCREEN			
1100 M	(+261.90%)	/M	=
Item No. 52: COLD PLANE ASPHALT CONCRETE PAVEMENT			
15000 M2	(+75.38%)	/M2	=
Item No. 65: ROADWAY EXCAVATION			
1500 M3	(+4.63%)	/M3	=
Item No. 100: HOT MIX ASPHALT			
800 TONN	(+5.00%)	/TONN	=
Item No. 101: HOT MIX ASPHALT (OPEN GRADED)			
1000 TONN	(+31.95%)	/TONN	=

Estimated total cost for Increase in Contract Item.....(Not To Exceed)\$400,000.00

**Adjustment of Compensation at Unit Price:**

In addition to the contract item prices paid for Item No. 110 and Item No. 111, the following agreed unit prices shall be paid for all hot mix asphalt placed during Stage 2 construction.

Item No. 110 HMA (A)\$xx.xx / TONNE@ 5,200 TONNE = \$xxx,xxx.xx  
 Item No. 110 HMA (A)\$xx.xx / TONNE@ 2,100 TONNE = \$xxx,xxx.xx

Compensation provided under these unit prices along with the contract item prices paid constitute full compensation, including all markups, for all costs incurred in placing Stage 2 hot mix asphalt complete in place as a result of this change.

Adjustment of Compensation at Agreed Unit Price .....(Not To Exceed)\$400,000.00

**Adjustment of Compensation at Lump Sum:**

**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

CCO 87	Suppl. No. 0	Contract No. 04 - 0120M4	Road 04-ALA-80-1.6/2.7	FED. AID LOC.: NO FED AID
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Compensate the Contractor for all additional costs incurred in performing the following Stage 2 work as a result of this change order:

- 1)Installing and removing all temporary railing (Type K).
- 2)Installing and removing all temporary traffic screen.
- 3)Performing all roadway excavation.
- 4)Performing all cold plane AC pavement.
- 5)Constructing all roadway subgrade.
- 6)Furnishing and placing all aggregate base.

For this work, the Contractor shall be compensated an agreed lump sum of \$x,xxx,xxx.00 in addition to the contract item prices paid which constitutes full and final compensation, including all markups, complete in place.

Adjustment of Compensation at Agreed Lump Sum .....(Not To Exceed) \$1,000,000.00

Not To Exceed

Estimated Cost: Increase ☒ Decrease ☐ \$ 1,800,000.00

By reason of this order the time of completion will be adjusted as follows: Deferred

Signature	Resident Engineer JEANNIE BALDERRAMOS	Date
Signature	Region Construction Division Chief TONY ANZIANO	Date
Signature	Region Construction Division Chief TONY ANZIANO	Date

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

**NOTE:** If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

Signature	(Print name and title)	Date
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**CONTRACT CHANGE ORDER MEMORANDUM**

DATE: 8/1/2013 Page 1 of 2

TO: DEANNA VILCHECK / JEANNIE BALDERRAMOS			FILE: <b>E.A.</b> 04 - 0120M4	
FROM: JEANNIE BALDERRAMOS			<b>CO-RTE-PM</b> 04-ALA-80-1.6/2.7	
			<b>FED. NO.</b> NO FED AID	
CCO#: <b>87</b>	SUPPLEMENT#: <b>0</b>	Category Code: <b>CHPX</b>	CONTINGENCY BALANCE (incl. this change) <b>\$0.00</b>	
COST: <b>\$1,800,000.00</b> INCREASE <input checked="" type="checkbox"/> DECREASE <input type="checkbox"/>			HEADQUARTERS APPROVAL REQUIRED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
SUPPLEMENTAL FUNDS PROVIDED: <b>\$0.00</b>			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
<b>CCO DESCRIPTION:</b> Incorporate changes in to Stage 2 constr			<b>PROJECT DESCRIPTION:</b> CONSTRUCT BRIDGES AND ROADWAY, AND ELECTRICAL SYSTEM	
Original Contract Time: <b>1140</b> Day(s)	Time Adj. This Change: <b>DEF</b> Day(s)	Previously Approved CCO Time Adjustments: <b>0</b> Day(s)	Percentage Time Adjusted: (including this change) <b>0</b> %	Total # of Unreconciled Deferred Time CCO(s): (including this change)

**THIS CHANGE ORDER PROVIDES FOR:**

Modifications to the mainline freeway being constructed during the full closure of the San Francisco Oakland bay Bridge (SFOBB).

This contract, the Oakland Touchdown 2 (OTD2) provides for the construction of the last remaining concrete box girder frame of the Oakland Touchdown structure and the construction of the remaining eastern roadway approach as part of the new east span of the San Francisco Oakland Bay Bridge (SFOBB).

As part of this work, the contract provides for a full weekend closure of the SFOBB at which time mainline traffic will be switched to the new SFOBB east span structure. This full closure is identified as Stage 2 construction work and calls for a hot mix asphalt overlay on the eastbound and westbound mainlines at the tie-ins to the existing roadway. The eastbound mainline also requires new roadway sections to be constructed over portions of a 230 meter length of the mainline roadway.

The Office of Toll Bridge Design has provided revised plan sheets that extend the westbound mainline overlay by 200 meters and modify the roadway sections on the eastbound mainline. The westbound overlay is necessary to fill a gap between the limits of this contract and the planned toll plaza overlay work. The changes to the eastbound roadway are needed to account for the existing OTD Detour roadway which crosses the new mainline roadway and was not shown in the plan details. The detour was placed in 2012 by an adjacent contract. Portions of the detour's asphalt section will need to be removed while other portions will be incorporated into the new roadway section.

This change order also provides for staging changes concerning the construction of the mainline concrete barrier. The plan calls for approximately 1,100 meters of Type 60S and Type 60SC concrete barrier to be constructed during the full bridge closure. In order to mitigate risks of a late opening of the full bridge closure, the barrier construction will be performed in Stage 3 after the traffic switch. As a result, temporary railing shall be placed during the Stage 2 work and then removed in Stage 3 after the permanent barrier has been constructed.

The additional scope of work includes grinding 15,000 square meters of the existing asphalt roadway, excavating 1,500 cubic meters of asphalt and soil, placing 1,800 metric tons of hot mix asphalt and installing 1,100 meters of temporary K-rail. All work shall be performed during the full bridge closure.

Compensation for the increases roadway excavation, temporary railing, asphalt grinding and hot mix asphalt shall be paid by increasing the appropriate contract items at contract prices at an estimated cost (NOT TO EXCEED) \$400,000. Adjustments of compensation shall be paid for the additional cost of performing the roadway work during the weekend closure and for impacts to the as-planned work due to the increased scope of work being performed within the limited closure window. Adjustments of compensation for hot mix asphalt shall be paid at agreed unit prices at an estimated cost (NOT TO EXCEED) \$400,000. An adjustment of compensation for the remaining roadway impacts shall be paid as an agreed lump sum (NOT TO EXCEED) \$1,000,000. The total estimated change order cost (NOT TO EXCEED) \$1,800,000 shall be financed from the contract's contingency fund. A detailed estimate is on file.

No adjustment of contract time is warranted as the work will not affect the controlling operation.

Maintenance concurs with this change.

**CONTRACT CHANGE ORDER MEMORANDUM**

EA: 0120M4 CCO: 87 - 0

DATE: 8/1/2013

Page 2 of 2

<b>CONCURRED BY:</b>			<b>ESTIMATE OF COST</b>	
Construction Engineer: JEANNIE BALDERRAMOS	Date		THIS REQUEST	TOTAL TO DATE
Bridge Engineer:	Date		ITEMS	
Project Engineer: GABRIEL T CRUZ	Date		FORCE ACCOUNT	
Project Manager: KEN TERPSTRA	Date		AGREED PRICE	
FHWA Rep.:	Date		ADJUSTMENT	
Environmental:	Date		<b>TOTAL</b>	
Other (specify): JAIME GUTIERREZ SR DGN ENG	Date		<b>FEDERAL PARTICIPATION</b>	
Other (specify): PHILIP HARSONO, DIST.MAINT	Date		<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input checked="" type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (MAINTENANCE) <input type="checkbox"/> NON-PARTICIPATING	
District Prior Approval By:	Date		FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type) <input type="checkbox"/> CCO FUNDED PER CONTRACT <input type="checkbox"/> CCO FUNDED AS FOLLOWS	
HQ (Issue Approve) By: LARRY SALHANEY	Date		FEDERAL FUNDING SOURCE	PERCENT
Resident Engineer's Signature:	Date			

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** August 7, 2013

**FR:** Dina Noel, Assistant Deputy Director Toll Bridge Program, CTC

**RE:** Agenda No. - 2b2  
Item- Consent Calendar – Contract Change Orders (CCOs)  
Oakland Touchdown 2 (OTD2) CCO 88-S0 – Extended Full Bridge  
Closure Traffic Control

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**Recommendation:**  
**APPROVAL**

**Cost:**  
Not to Exceed \$5,000,000.00

**Schedule Impacts:**  
NA

**Discussion:**  
**CCO 88-S0 in the not-to-exceed amount of \$5,000,000.00** will provide for traffic control and related costs for the extended four-day full bridge closure of the SFOBB.

The major costs include providing compensation for regional traffic control officers to be employed by the local cities impacted by the closure, and for the additional cost of: maintaining the various ramps and connector closures, providing additional portable changeable message signs, additional standby equipment (to mitigate risks of a delayed opening), additional traffic control to provide residential access to Yerba Buena and Treasure Islands, and miscellaneous costs pertaining to public information efforts, additional detour signing, staff support and additional street sweeping.

**Risk Management:**  
The OTD2 Risk Register carries Risk Id #7 “Construction impacts Public Traffic more than provided for in the Contract”. This risk has a range of \$3 million to \$5 million. The anticipated cost of this change is within that range.

## *Memorandum*

**Attachment(s):**

1. Draft CCO N0. 88-S0
2. Draft CCO No. 88-S0 Memorandum

**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

<b>CCO 88</b>	<b>Suppl. No. 0</b>	<b>Contract No. 04 - 0120M4</b>	<b>Road 04-ALA-80-1.6/2.7</b>	<b>FED. AID LOC.: NO FED AID</b>
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**To: FLATIRON WEST INC**

You are directed to make the following changes from the plans and specifications or do the following described work not included in the plans and specifications for this contract. **NOTE: This change order is not effective until approved by the Engineer.**

Description of work to be done, estimate of quantities and prices to be paid. (Segregate between additional work at contract price, agreed price and force account.) Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time. This last percentage shown is the net accumulated increase or decrease from the original quantity in the Engineer's Estimate.

Modify the planned Stage 2 full closure of the San Francisco Oakland Bay Bridge (SFOBB) to provide for a 10:00 P.M. Wednesday night through 5:00 A.M. Tuesday morning closure as shown on Page No. 3 of this change order.

Provide for the extended full closure of the SFOBB and provide for all detours signing as shown on Pages 4 through 8 of this change order.

**Extra Work at Force Account:**

Perform the following work pertaining to the extended full closure of the SFOBB as determined by the Engineer:

- 1) Provide additional flagging, traffic control and crowd control at the project site during the extended full closure as determined by the Engineer.
- 2) Provide miscellaneous support for the extended full closure including additional street sweeping, public access, public information, and staff support as authorized by the Engineer.
- 3) In accordance with Section 9-1.03B "Work Performed by Special Forces or Other Special Services" of the Standard Specifications, the Contractor shall reimburse the City of San Francisco, City of Oakland, City of San Rafael, City of Emeryville and the City of Hayward in order that these cities provide traffic control officers at locations designated by the Engineer in order to minimize regional traffic disruptions caused by the closure of the SFOBB. The Contractor shall pay the amount of each invoice submitted by these cities within 30 calendar days of their approval by the Engineer.

Estimated cost of Extra Work at Force Account .....(Not To Exceed) \$3,000,000.00

**Adjustment of Compensation at Lump Sum:**

Compensate the Contractor for all additional costs incurred in performing the following Stage 2 work due to the extended full closure of the SFOBB implemented under this change order:

- 1) Provide all traffic control necessary to implement the extended full closure including all ramps and connectors and provide all detour signing as shown on Pages 4 through 8 of this change order. This work shall also include 2-way traffic control on the lower (eastbound) deck of the SFOBB west span for public access to Treasure and Yerba Buena Islands as determined by the Engineer.
- 2) Provide 210 EA portable changeable message signs for the extended full closure to provide motorist information of the full SFOBB closure. Of the 210 EA PCMS's provided, 167 EA of the signs shall be placed at the locations identified on Sheets No. 92 through No. 104 of the Contract Plans. The remaining 43 EA PCMS's shall be placed as determined by the Engineer.
- 3) Provide on-site backup equipment for all roadway excavation, subgrade preparation, aggregate base, hot mix asphalt, cold plane AC pavement, temporary railing installation and removal, pavement delineation and all other Stage 2 work being performed during the extended full closure.

For this work, the Contractor shall be compensated an agreed lump sum of \$x,xxx,xxx.00 in addition to the contract item prices paid which constitutes full and final compensation, including all markups, complete in place.

Adjustment of Compensation at Agreed Lump Sum .....(Not To Exceed) \$2,000,000.00

**CONTRACT CHANGE ORDER**

Change Requested by: Engineer

<b>CCO 88</b>	<b>Suppl. No. 0</b>	<b>Contract No. 04 - 0120M4</b>	<b>Road 04-ALA-80-1.6/2.7</b>	<b>FED. AID LOC.: NO FED AID</b>
---------------	---------------------	---------------------------------	-------------------------------	----------------------------------

Estimated Cost: Increase ☒ Decrease ☐ \$5,000,000.00

By reason of this order the time of completion will be adjusted as follows: 0 days

**Submitted by**

<b>Signature</b>	<b>Resident Engineer</b> JEANNIE BALDERRAMOS	<b>Date</b>
------------------	---	-------------

**Approval Recommended by**

<b>Signature</b>	<b>Region Construction Division Chief</b> TONY ANZIANO	<b>Date</b>
------------------	---	-------------

**Engineer Approval by**

<b>Signature</b>	<b>Region Construction Division Chief</b> TONY ANZIANO	<b>Date</b>
------------------	---	-------------

We the undersigned contractor, have given careful consideration to the change proposed and agree, if this proposal is approved, that we will provide all equipment, furnish the materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will accept as full payment therefor the prices shown above.

**NOTE: If you, the contractor, do not sign acceptance of this order, your attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.**

**Contractor Acceptance by**

<b>Signature</b>	<b>(Print name and title)</b>	<b>Date</b>
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**CONTRACT CHANGE ORDER MEMORANDUM**

DATE: 8/1/2013

Page 1 of 2

TO: DEANNA VILCHECK / JEANNIE BALDERRAMOS			FILE: <b>E.A.</b> 04 - 0120M4	
FROM: JEANNIE BALDERRAMOS			<b>CO-RTE-PM</b> 04-ALA-80-1.6/2.7	
			<b>FED. NO.</b> NO FED AID	
CCO#: <b>88</b>	SUPPLEMENT#: <b>0</b>	Category Code: <b>CHPX</b>	CONTINGENCY BALANCE (incl. this change) <b>\$0.00</b>	
COST: <b>\$5,000,000.00</b>			INCREASE <input checked="" type="checkbox"/> DECREASE <input type="checkbox"/>	
SUPPLEMENTAL FUNDS PROVIDED: <b>\$0.00</b>			HEADQUARTERS APPROVAL REQUIRED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
			IS THIS REQUEST IN ACCORDANCE WITH ENVIRONMENTAL DOCUMENTS? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
<b>CCO DESCRIPTION:</b> Modify the Planned stage 2 full closure			<b>PROJECT DESCRIPTION:</b> CONSTRUCT BRIDGES AND ROADWAY, AND ELECTRICAL SYSTEM	
Original Contract Time: <b>1140</b> Day(s)	Time Adj. This Change: <b>0</b> Day(s)	Previously Approved CCO Time Adjustments: <b>0</b> Day(s)	Percentage Time Adjusted: (including this change) <b>0</b> %	Total # of Unreconciled Deferred Time CCO(s): (including this change) <b>0</b>

**THIS CHANGE ORDER PROVIDES FOR:**

Additional traffic control and support costs for the extended 4-day full bridge closure of the SFOBB.

This contract, the Oakland Touchdown 2 (OTD2) provides for the construction of the last remaining concrete box girder frame of the Oakland Touchdown structure and the construction of the remaining eastern roadway approach as part of the new east span of the San Francisco Oakland Bay Bridge (SFOBB).

As part of this work, the contract provides for a 72 hour full weekend closure of the SFOBB at which time mainline traffic will be switched to the new SFOBB east span structure. This change order will provide for the as-planned 72 hour closure to be extended to a 4 day (103 hour) closure. The extended closure is necessary to ensure all work is completed within the closure window including the added scope of work comprised of overlaying the adjacent toll plaza and constructing a temporary bike path to access the new span.

The change order also provides detailed traffic control and detour signing plans for the full bridge closure which were not listed in the contract plans. The cost of providing the increased scope and extended duration of the traffic control required for the full closure along with added detour signing and the increased scope of providing and coordinating the placement of the as-planned 200 each portable changeable message signs will be paid under this change order.

Compensation for regional traffic control officers employed by the local cities impacted by the closure along with compensation for public outreach, additional site access, and staff support costs will be provided. Costs will also be incurred to provide additional stand by equipment to mitigate risks of a delayed opening.

Compensation for the increased scope of traffic control, detour signing, portable changeable message signs and standby equipment shall be paid as an agreed lump sum (NOT TO EXCEED) \$2,000,000. All other full closure support cost shall be paid as extra work at force account at an estimated cost (NOT TO EXCEED) \$3,000,000. The total estimated change order cost (NOT TO EXCEED) \$5,000,000 shall be financed from the contract's contingency fund. A detailed estimate is on file.

No adjustment of contract time is warranted as the work will not affect the controlling operation.

Maintenance concurrence is required.

**CONTRACT CHANGE ORDER MEMORANDUM**

EA: 0120M4 CCO: 88 - 0

DATE: 8/1/2013

Page 2 of 2

<b>CONCURRED BY:</b>			<b>ESTIMATE OF COST</b>		
Construction Engineer:	JEANNIE BALDERRAMOS	Date		THIS REQUEST	TOTAL TO DATE
Bridge Engineer:		Date	ITEMS	\$0.00	\$0.00
Project Engineer:	GABRIEL T CRUZ	Date	FORCE ACCOUNT	\$3,000,000.00	\$3,000,000.00
Project Manager:	KEN TERPSTRA	Date	AGREED PRICE	\$0.00	\$0.00
FHWA Rep.:		Date	ADJUSTMENT	\$2,000,000.00	\$2,000,000.00
Environmental:		Date	<b>TOTAL</b>	\$5,000,000.00	\$5,000,000.00
Other (specify):	JAIME GUTIERREZ SR DGN ENG	Date	<b>FEDERAL PARTICIPATION</b>		
Other (specify):	PHILIP HARSONO, DIST MAINT.	Date	<input type="checkbox"/> PARTICIPATING <input type="checkbox"/> PARTICIPATING IN PART <input checked="" type="checkbox"/> NONE <input type="checkbox"/> NON-PARTICIPATING (MAINTENANCE) <input type="checkbox"/> NON-PARTICIPATING		
District Prior Approval By:		Date	FEDERAL SEGREGATION (if more than one Funding Source or P.I.P. type)		
HQ (Issue Approve) By:	LARRY SALHANEY	Date	<input type="checkbox"/> CCO FUNDED PER CONTRACT <input type="checkbox"/> CCO FUNDED AS FOLLOWS		
Resident Engineer's Signature:		Date	FEDERAL FUNDING SOURCE      PERCENT _____ _____ _____		

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** August 7, 2013

**FR:** Andrew Fremier, Deputy Executive Director, Operations, MTC/BATA

**RE:** Agenda No. - 3a  
Progress Reports  
Item- 2013 Second Quarter Project Progress and Financial Update

---

**Recommendation:**  
**APPROVAL**

**Cost:**  
NA

**Schedule Impacts:**  
NA

**Discussion:**  
Included in this packet, for TBPOC approval, is version 6 of the 2013 Second Quarter Project Progress and Financial Update. This report includes current costs and forecasts.

**Attachment(s):**  
2013 Second Quarter Project Progress and Financial Update (see end of packet)

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** August 7, 2013

**FR:** Tony Anziano – Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 4a  
San Francisco-Oakland Bay Bridge  
Item- Seismic Safety Opening Status

---

**Recommendation:**

For Information Only

**Cost:**

NA

**Schedule Impacts:**

**Discussion:**

1. Status of Shear Key Saddle Retrofit

Saddle fabrication is on-going at both XKT and Steward Machine with sections scheduled to arrive at Pier 7 in multiple shipments beginning the last week of September through the middle of October 2013. Completion of the retrofit continues to track to the December 10, 2013 forecast.

2. Status of Bearing Shims

The temporary bearing shims have been fabricated and delivered to Pier 7. Installation of the shims is pending TBPOC approval and estimated to take two to three days.

Multiple reviews of the bearing shim proposal have been on-going for the TBPOC and BATA. Versions of these reviews are expected on August 9 for TBPOC review and will be submitted under separate cover as the reviews become available.

### 3. Seismic Safety Opening Options

The TBPOC requested the PMT to review possible opening weekends in September should the bearing shim proposal deemed to be acceptable. The PMT was asked to review Labor Day Weekend and the weekends of September 12 and 26. The following table summarizes the potential impacts of each weekend.

Closure Window	Labor Day Weekend PM Wed Aug 28 to AM Tue Sep 2 (5+ days)	PM Wed Sep 11 to AM Mon Sep 16 (4+ days)	PM Wed Sep 25 to AM Mon Sep 30 (4+ days)
Possible Number of Attendees for Weekend Events	146,000 through Bay Area, excluding America's Cup	224,000 through Bay Area, excluding America's Cup and including 50,000 at Treasure Island	718,000 through Bay Area, excluding America's Cup and Oracle Week activities on Treasure Island
Estimated Project TRO+/Standby Delay Costs	\$0 M	\$5.6 M	\$11.2 M

Construction staff has been planning for a five day closure over the Labor Day weekend starting on Wednesday night provide time not only for possible opening activities but schedule contingencies for construction delays. Critical activities for opening the bridge including demolition of portions of the existing bridge and eastbound and westbound paving and drainage on the Oakland end of the bridge. These activities are concurrent and forecast to take between 2.5 and 3 days without schedule contingencies.

Past experience has shown that an extra day would is needed to cover possible delay risks, especially for cooler or wetter weather that can delay paving and striping operations. Many activities have been removed from the opening weekend to avoid possible schedule delays, including some drainage work and barrier work. Other activities like installation of the temporary bikepath structure at OTD could be delayed to after opening if the controlling bridge demolition work is delayed. Construction recommends a minimum of 4 day construction window to open the bridge to traffic.

**Attachment(s):**

1. SSO Delay Costs and Event Conflicts
2. Weekend Closure Scenarios
3. PIO opening plan
4. Seismic Safety Peer Review Panel letter to the TBPOC, August 8, 2013
5. FHWA SAS Review letter to the TBPOC, August 9, 2013
6. Modjeski and Masters, Inc. San Francisco-Oakland Bay Bridge Seismic Retrofit Project Independent Review of Analysis and Strategy to Shim Bearings at Pier E2 to Achieve Seismic Design Requirements, August 9, 2013 (*Report and Appendix sent under separate cover*)
7. Buckland & Taylor Independent Review of the Seismic Safety Peer Review Panel Proposal to Shim the Bearings at Pier E2 of the New East Span of the San Francisco-Oakland Bay Bridge, August 6, 2013 (*Report sent under separate cover*)

**Potential Risk of SSO Delay Estimate per 50% Probable Value from Draft 2013 Q2 Risk Register**

Contracts		Daily TRO + Standby \$	Events		
			TRO+ / Standby \$	9/16/2013	Approx. # of Attendees
1	SAS	N / A			
2	YBITS1/OTD Dtr	\$10,000			
3	YBITS2	\$32,000			
4	OTD2	\$42,857			
5	Standby Cost	\$200,000			
6	Corridor Risk	\$62,338			
7	Corridor COS	\$48,052			
Total \$		\$395,247			

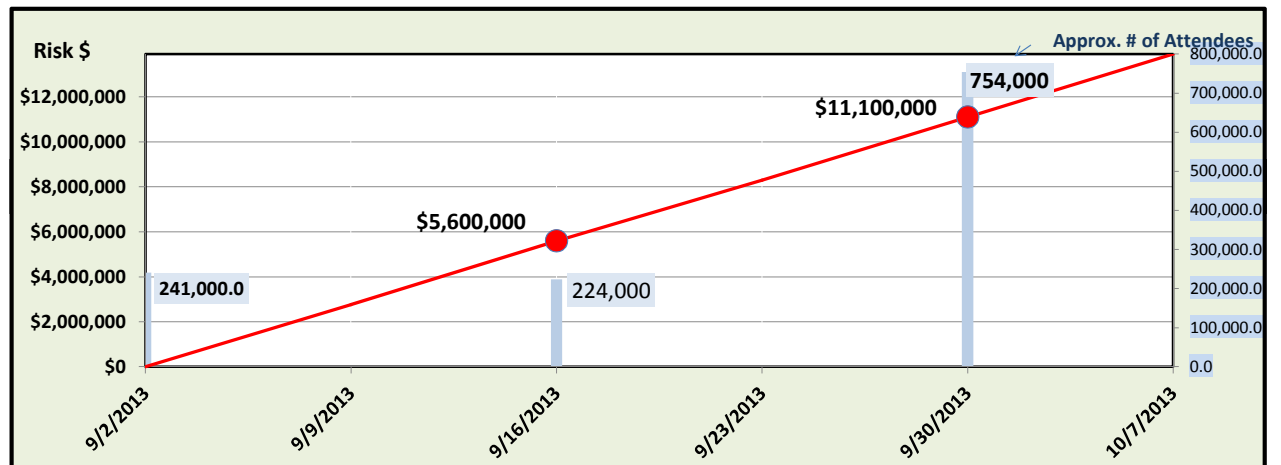
  

Events		TRO+ / Standby \$	9/30/2013	Approx. # of Attendees
PM Wed Sep 11 to AM Mon Sep 16				
Sep 7-21	America's Cup Finals (Time: varied)	\$140,000		?
Sep 15	Jaguars @ Raiders (Oakland Coliseum)	\$448,000		55,000
Sep 14	Ohio State @ Cal	600,000		63,000
Sep 12-15	Away: Giants, A's 49ers	2,800,000		
Sep 14-15	Int'l Dragon Boat Races at Treasure Island	872,727		50,000
Sep 14-15	SF Chinatown Autumn Moon Festival	672,727		20,000
Sep 14-15	Ghirardelli Square Chocolate Festival			36,000
Total \$		\$5,600,000		224,000

Events		TRO+ / Standby \$	9/30/2013	Approx. # of Attendees
PM Wed Sep 25 to AM Mon Sep 30				
Sep 29	Redskins @ Raiders- Coliseum	\$280,000		55,000
Sep 24-29	Giants @ home	\$896,000		168,000
Sep 26-29	Away: 49ers, and A's	1,200,000		
Sep 27-29	Eat Real Festival @ Jack London Sq Oakland	5,600,000		125,000 Avg (100,000-150,000)
Sep 29	Folsom Street Fair San Francisco	1,745,455		400,000 +
Sep 28-29	Treasure Island Flea	1,345,455		6,000
Sep 23-26	Oracle World Conf.			?
Sep 25	Oracle Appreciation Event			?
Total \$		\$11,100,000		754,000

Events		Approx. # of Attendees
PM Wed Aug 28 to AM Tue Sep 2		
Sep 1-4	America's Cup @ Red Bull Youth America's Cup	?
Aug 31	Northwestern @ Home	63,000.0
Aug 30- Sep 2	A's @ Home (20,000 to 30,000)	100,000.0
Sep 1-4	Away: Giants, 49ers, and Raiders	
Aug 31-Sep 2	Sausalito Art Festival	30,000.0
Sep 1	Oakland Pride (40,000 to 50,000)	45,000.0
Sep 2	Hiero Day, Oakland	3,000.0
Approx Total		241,000.0



## WEEKEND CLOSURE SCENARIOS

	5-Day Closure	4-Day Closure	3 -Day Closure	Duration + Contingency/Risk
<u><b>YBITS1</b></u>				
Polyesther Concrete	YES	YES	YES	1+1
<u><b>SAS</b></u>				
*				
<u><b>YBITS1/OTD-D</b></u>				
Demolition	YES	YES	<b>Partial</b>	3+1
Bikepath Install (Begins after Demolition is complete)	YES	<b>NO</b>	<b>NO</b>	2+1
<u><b>OTD2</b></u>				
Paving Area 1 - East of Toll Plaza - WB	YES	YES	BEFORE	2+2
Paving Area 2 - Metering Lights to Toll Plaza - WB	YES	YES	YES	
Paving Area 3 - Metering Lights to OTD - Seismic - WB	YES	YES	YES	2+2
Paving EastBound	YES	YES	<b>NO</b>	3+1
Drainage System 14 (Effects completion of Paving EB)	YES	YES	YES	

\* No Work Planned on the SAS Contract during a Weekend Closure

## Contract Work Removed Bridge Opening Weekend

Drainage - South side of Eastbound

Electrical

Permanent Barrier (install Temp K-Rail instead)

Open-Graded Asphalt - Eastbound

Ponding Area

Quick Curb

To: Toll Bridge Oversight Committee (TBPOC)  
From: Toll Bridge Seismic Safety Peer Review Panel (SSPRP)

August 8, 2013

Ref: Seismic Safety and Opening of the New San Francisco Oakland Bay Bridge

Dear TBPOC:

We are writing to you to restate our opinion that the opening of the New San Francisco Oakland Bay Bridge East Bay Spans should not be delayed once seismic safety has been achieved. This has been and is the opinion of the Caltrans SAB and the Toll Bridge SSPRP from the very beginning. We have already experienced significant delays for this important seismic safety project due to political posturing and inquiries, prompted by technical misinformation. To date we are fortunate that we did not have a repetition of a Loma Prieta type event or an even bigger earthquake in the Bay Area, an event that is almost certain to occur, we just don't know when.

The existing East Bay Spans of the Bay Bridge, while upgraded and retrofitted following Loma Prieta, still do not provide the desired and even mandated level of life safety for even ordinary bridges (exactly the reason why we are building the new bridge) and should be decommissioned ASAP, namely as soon as traffic can be moved to the new bridge safely, both in terms of traffic operations and earthquakes. The new bridge, even with two of the shear keys on bent E-2 not yet functioning, has already achieved a level of seismic safety that exceeds that of the old bridge by at least a factor of two. Actually, based on all analyses provided to date, the new bridge (with shims installed as discussed below) has met the design intent - namely to withstand the 1,500 year event with minimal damage that will allow traffic operations after inspection and minor repairs as desired for a life line bridge.

In most other bridges the seismic loads are carried by the bearings and the shear keys are the secondary system that will catch the bridge once the bearings have failed. The New Bay Bridge is different. For the New Bay Bridge the shear key system on E-2 was conceived and designed to carry the entire lateral load. To achieve this, the rocker bearings have a gap on both sides so that the transverse loads are not transmitted through the bearings. This gap also allows for improved rotation, easier inspection, and reduced maintenance of the bearings over the 150 year design life of the bridge.

Currently, shear keys S1 and S2 are not complete and cannot carry lateral loads. However, in case of an earthquake the lateral load can be carried by the center shear keys S3 and S4 on the cross beam of bent E-2 and the four bearings as long as the gaps in the bearings are closed and the bearings act jointly with shear keys S3 and S4. This short-term interim solution has been rationally evaluated by the designers and Caltrans, including FEM analysis of the bearing upper and lower housings for seismic loads as well as the bearing hold down assemblies (see Seismic Evaluation of SAS at E-2 Pier prior to completion of shear Keys S1 & S2, July 15, 2013).

The closing of the gaps is accomplished through the installation of shims which are Teflon coated machined steel plates that still allow bearing rotation but no significant lateral

movement in the bearings. The only drawback is that inspection and maintenance of the bearings is somewhat more difficult during the short time the shims are in place. This drawback is more than offset by the protection that will be provided to the bearings by the shims should a major earthquake occur before shear keys S1 and S2 are retrofitted. We understand that the shims are manufactured, were delivered to the site, and can be installed in one week.

With the design level of seismic safety achieved with shims in place, there is no reason or justification to delay the opening of the new bridge. This way we can provide seismic safety for the general public at the earliest possible time. As long as we are ready with all other traffic and seismic related safety and functionality issues, there is no need to wait until December (or whenever the outer shear keys S1 and S2 on E-2 are completed) to open the bridge. The New San Francisco Oakland Bay Bridge East Bay Spans should be opened for traffic on Labor Day, as originally planned.

In the opinion of the SSPRP, the State is taking on a higher risk in delaying the opening of New Bridge than in opening the New Bridge at the earliest possible date while continuing with the retrofit of shear keys S1 and S2.

For the SSPRP  
Sincerely Yours

A handwritten signature in blue ink, appearing to read "Frieder Seible", is written over a light blue rectangular background.

Frieder Seible, chair, SSPRP



U.S. Department  
of Transportation  
**Federal Highway  
Administration**

**California Division**

August 9, 2013

650 Capitol Mall, Suite 4-100  
Sacramento, CA 95814  
(916) 498-5001  
(916) 498-5008 (fax)

In Reply Refer To:  
HDA-CA

Mr. Steve Heminger  
Chair, Toll Bridge Program Oversight Committee  
Department of Transportation  
Office of the Director  
1120 N Street  
P.O. Box 942873  
Sacramento, CA 94273

Subject: FHWA's Response to Review Requests of the San Francisco-Oakland Bay Bridge

Dear Mr. Heminger:

This letter is in response to two reviews that the Toll Bridge Program Oversight Committee (TBPOC) asked the Federal Highway Administration (FHWA) to perform of the San Francisco-Oakland Bay Bridge East Span (SFOBB) Seismic Replacement Project. One review was for the disposition of the Galvanized ASTM 354 Grade BD bolts/rods, and the other for the Pier E2 interim installation of bearing shims to allow opening the bridge while the shear key retrofit progressed.

We have concluded both reviews and agree with the approaches. We concur with the disposition of the bolts/rods and the recommended course of action described in the TBPOC's final report dated July 8, 2013, as shown in Table ES-2 and subsequent language on pages ES-16 and 17. FHWA also agrees with the strategy for an interim shim proposal to temporarily restore the shear capacity lost, allowing the bridge to be open to traffic prior to and during the retrofit of the S1 and S2 shear keys. In addition, FHWA has reviewed and agreed that the post-tensioned retrofit of the Pier E2 S1 and S2 shear keys will adequately replace the function of the failed anchor rods. The following paragraphs describe our review observations:

The first request, made on May 8, 2013, asked for "FHWA to conduct an independent review of our (TBPOC) findings and recommendations concerning the galvanized high strength bolts...". These high strength bolts or rods consist of Galvanized ASTM A354 Grade BD material and are located on the Self-Anchored Suspension (SAS) span totaling 2,306 in number and listed in 17 different locations. The TBPOC's July 8, 2013 final report classified the bolts into the following categories:

1. Rods whose clamping capacity is to be replaced before opening the bridge to traffic;
2. Rods that are to be replaced after opening the bridge, as a precautionary measure to address concerns of longer-term stress corrosion;

3. Rods that are subject to mitigating actions, such as reduced tension, dehumidification or other corrosion protection systems; and
4. Rods that are acceptable for use, will meet performance expectations, and will undergo a regular inspection schedule.

The FHWA's independent review to determine the disposition of the bolts/rods consisted of:

- Site visits to see first-hand where the different categories of bolt/rods were located, with particular focus on Pier E2 where over one-half of the bolts/rods are located (locations 1-6), the tower base (locations 12 -13), the suspension cable anchorages (location 7), the east saddle anchor and tie rods (locations 14 and 15), and the cable band strong back anchor rods (location 16).
- Review of contract documentation, including but not limited to special provisions, quality assurance audit documentation of fabricators and sub-contractors, material acceptance testing (including chemistry, average hardness, and tensile strengths), heat treating, cleaning, and galvanization processes, contract drawings, grouting procedures, and bolt/rod installation and tensioning.
- Review of testing documentation post failure of the Pier E2 S1 and S2 shear key masonry plate anchor rods. This included interviews of project staff and experts as well as presentations of tests performed with results of those tests, including comparisons between the rods supplied in 2008 and rods supplied in 2010. Tests included Rockwell hardness values across ends of the bolts/rods, Charpy V-notch toughness tests, tensile capacity tests, and metallurgical evaluations of failure planes.
- Review of the retrofit of the Pier E2, S1 and S2 shear key masonry plate anchor rod retrofit plan sheets and special provisions. The team also visited the site to view the preparatory work of the pier cap to accommodate the retrofit, interviewed the designer of record and project staff to discuss our observations, and participated in technical update discussions. We discussed the placement of the concrete and mix type as well as PL2 corrosion protection practices. We also discussed post-tensioning stages and strength requirements prior to post-tensioning, including projected losses at release with the project engineer and designer of record. In conclusion, the team was satisfied with the review material and the resulting discussions regarding the retrofit and concurs with this approach as a solution to replacement of the failed anchor rods.

Throughout our review of the Galvanized A354 Grade BD bolts/rods, we asked many questions, all of which were answered. Many of our discussions resulted in tasks to perform during the next few weeks as the bridge nears completion. For example, project staff and consulting engineers continue to perform testing, such as the Townsend and baseline ultrasonic testing, which can be used to develop and implement long-term monitoring, maintenance, and replacement strategies. One of our observations resulted in a recommendation that project staff begin dehumidifying applicable bolt/rod locations as soon as practical.

Your second request, dated July 12, 2013, asks FHWA to “conduct an independent review of the Seismic Safety Peer Review Panel (SSPRP) proposal to shim the bearings at Pier E2” of the self-anchoring suspension span.

FHWA's review included an assessment of the proposal documentation, a site visit to see first-hand where bearing translation would be limited to engage seismic forces through use of translation "limiters" (also referred to as "shims"), and technical discussions with project engineers and the designer of record.

The FHWA review team was impressed with the level of expertise used to fashion this interim means of limiting the movement of the bearings so they engage and safely transfer seismic forces while the installation of the Pier E2 S1 and S2 shear key retrofit continues. Once the Pier E2 bearing movement limiters are properly installed, this interim solution will restore the capacity lost prior to and during the retrofit of the S1 and S2 shear keys and provide a comparable level of seismic performance. As such, we see no reason to delay opening the bridge to traffic prior to the shear key retrofit being completed.

We want to thank your staff, consultants, and construction workers for their professionalism during our review.

Should you have questions, please do not hesitate to contact me at (916) 498-5001 or by email at [Vincent.Mammano@dot.gov](mailto:Vincent.Mammano@dot.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Vincent P. Mammano", with a stylized, flowing script.

Vincent P. Mammano  
Division Administrator

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** August 7, 2013

**FR:** Andrew Gordon, Gareth Lacy, Randy Rentschler, Will Shuck

**RE:** Agenda No. - 4a1  
San Francisco-Oakland Bay Bridge  
Item- New East Span Opening Announcement – Media and Legislative Strategy

---

**Recommendation:**

For Information Only

**Cost:**

NA

**Schedule Impacts:**

N/A

**Discussion:**

This memo represents the outcome of our discussions to prepare for an announcement on the date of the opening of the Bay Bridge, and the ancillary issues associated with that decision.

Presuming unanimity of views from FHWA, the Seismic Safety Peer Review Panel and other related advisors that lead to a decision by TBPOC to open the new East Span using a plan of installing temporary steel shims in advance of the full completion of the E-2 retrofit, we recommended the following be considered by TBPOC:

1. Recognizing that, unlike every other major decision point that has preceded this moment, we have no available public venue for this decision process until a September 11th BATA Oversight Committee meeting.
2. Given the decision process thus far, and the actions of July 8th and 10th, that TBPOC on August 12th issue a notice of a public meeting to be held at the MetroCenter on August 15th. On August 12th, when we post the notice of this meeting, we also would make public the letters of advice received from FHWA,

the Peer Review Panel and other advice TBPOC has sought or received. FHWA's letter, should, as of Friday, August 9th, be assumed already to be public. At the August 15th public meeting, statements by members of the public or statements from others can be placed into the public record. TBPOC will take this information under advisement for a decision to be made at a time subsequent to the hearing date.

3. That the formal opening decision be made by TBPOC at an in-person meeting; and that this meeting be immediately followed by an announcement to the public in the form of a press conference with participation from TBPOC members and other technical experts as required.
4. In addition to the opening date announcement, TBPOC will need to make statements on a number of related matters. We have included the most pressing issues below and have included our recommendations for your consideration.

- a. The length of the bridge closure.

We recommend the bridge be closed only for the minimum needed to complete the construction work. The Bay Bridge will be closed at MONTH, DAY, HOUR and is expected to re-open on MONTH, DAY, HOUR. That a statement be included that notifies the public that the exact time of reopening will depend on actual construction completion. Attached is a schedule of all known major events in the Bay Bridge corridor for the months of September and October. While some weekends are better than others, we conclude that we can mitigate any potential conflicts and TBPOC is clear to make a decision as it sees fit.

- b. A dedication/chain-cutting ceremony and possible public access.

It may be necessary for TBPOC to state clearly that no public ceremony of any kind will occur during the period of closure and opening of the new East Span before traffic moves onto the new bridge. Instead, the new bridge would simply open to traffic when it is ready. In that case, a commemoration event for workers and others, and possible public access could be held at a later time.

- c. Cost and schedule of the retrofit of E-2 and the status of contractor incentives.

Current cost estimates and schedule for the completion of the retrofit of E-2 have not changed from what was announced in July, 2013. The retrofit cost is currently expected to be \$20 million and is estimated to be completed on Dec. 10th, 2013. (UPDATE AS NEEDED). We recommend restating that the investigation found shared responsibility for the problems and there will be shared responsibility for the solution. Those issues have not been resolved and we are still in discussion with the contractor and designers. The focus right now is on cooperating to finish the work, including the retrofit solution.

d. Status of other bolts – ‘Wet Test’

We recommend that TBPOB issue a statement related to this subject as it pertains to the opening decision.

In addition, and in conjunction with TBPOC member agencies, a coordinated plan of tasks will be needed that includes the timely notification of certain legislative leaders (Speaker and Pro Tem, Sen. DeSaulnier, Assem. Rich Gordon plus the option to extend to others who have shown up at prior briefings – as needed), issue news releases, update relevant Web sites, use social media channels to announce the opening date and post press materials; coordinate in-person and telephone interviews of TBPOC members; provide a simple illustration of shim installation; and make available at Pier 7 models of the shear keys, bearings and shims.

A press release will be drafted to emphasize the following top-line messages:

- Safety has always been the number one factor for this project;
- Travelers are safer on new bridge once the shims are installed;
- After full analysis, and the considered opinion of outside experts, there is unanimity of opinion that opening the bridge prior to the completion of the E-2 retro-fi is the best course of action.
- Even the temporary fix meets the design requirement that the new East Span withstand a 1,500-year earthquake.
- The old East Span structure has served the Bay Area well for near 80 years, but it well past time to be replaced.
- The TBPOC members decided to take the advice of their experts.
- The permanent retrofit of E-2 is proceeding to plan.

## **BAY AREA EVENTS, SEPTEMBER 2013**

(Updated 7/29 2 p.m.)

### **Friday August 30-Monday Sept 2**

Sports: America's Cup – Red Bull Youth America's Cup – Sept 1-4 (11-2pm each day)

Sac State @ SJ State, San Jose, Thurs 8/29

Northwestern @ Cal Berkeley, Saturday August 31, 7:30 p.m.

A's @ home (Coliseum)

(Giants away, 49ers away, Raiders away)

Festivals: Sausalito Art Festival

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### **Friday Sept 6-Mon Sept 9**

Sports: America's Cup – Finals (Sept 7-21, varied racing times)

A's @ home (Coliseum) Sept 5-6-7-8

Giants @ home (PacBell)

Portland State @ Cal Berkeley, Sat 9/7 2 p.m.

San Jose State @ Stanford, Sat 9/7 8 p.m.

Packers @ 49ers (Sun Sept 8, Candlestick @1:25pm)

(Raiders away)

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### **Friday Sept 13-Monday Sept 16**

Sports: America's Cup – Finals (Sept 7-21, varied racing times)

Ohio State @ Cal Berkeley, Sat, Sept 14, 4 p.m.

Jaguars @ Raiders (Sun Sept 15, 1:25pm) – Oakland Coliseum

(Giants away; As away Sept 12-13-14-15; 49ers away, Stanford away)

Festivals: SF Int'l Dragon Boat Festival (Sept 14-15) at Treasure Island (25,000 people/day)

SF Chinatown Autumn Moon Festival (Sept 14-15, 11am-6pm)

Ghirardelli Square Chocolate Festival

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### **Friday Sept 20-Mon Sept 23**

Sports: America's Cup – Finals (Sept 7-21, varied racing times)

Sept 21 – AZ State @ Stanford

Sept 22 – Colts @ 49ers (Candlestick @ 1:25pm)

A's @ Coliseum Sept 19-20-21-22

(Giants away; Raiders away, SJ State away)

Festivals: Sept 20-22 Oktoberfest at Pier 48, SF

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## **MIDWEEK – ORACLE WORLD 9/23-9/26**

Conference: Oracle World 9/23-9/26

Wed Sept 25 Oracle Open World Appreciation Event (Treasure Island)

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## **Friday Sept 27-Monday Sept 30**

Sports: Utah @ San Jose State, Fri 9/27 6 p.m.

Redskins @ Raiders (Sept 29) – Coliseum

Giants @ home (PacBell)

(49ers away; As away Sept 26-27-28-29, Stanford away, Cal Bears away)

Festivals: 2013 Eat Real Festival – Jack London Square, Oakland – Sept 27-29

2013 Folsom Street Fair, San Francisco – Sun, Sept 29

Treasure Island Flea, Sept 28-29, 10am-4pm

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** August 7, 2013

**FR:** Tony Anziano – Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 4b  
San Francisco-Oakland Bay Bridge Updates  
Item- Corridor Update/Schedule

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**Recommendation:**

For Information Only

**Cost:**

NA

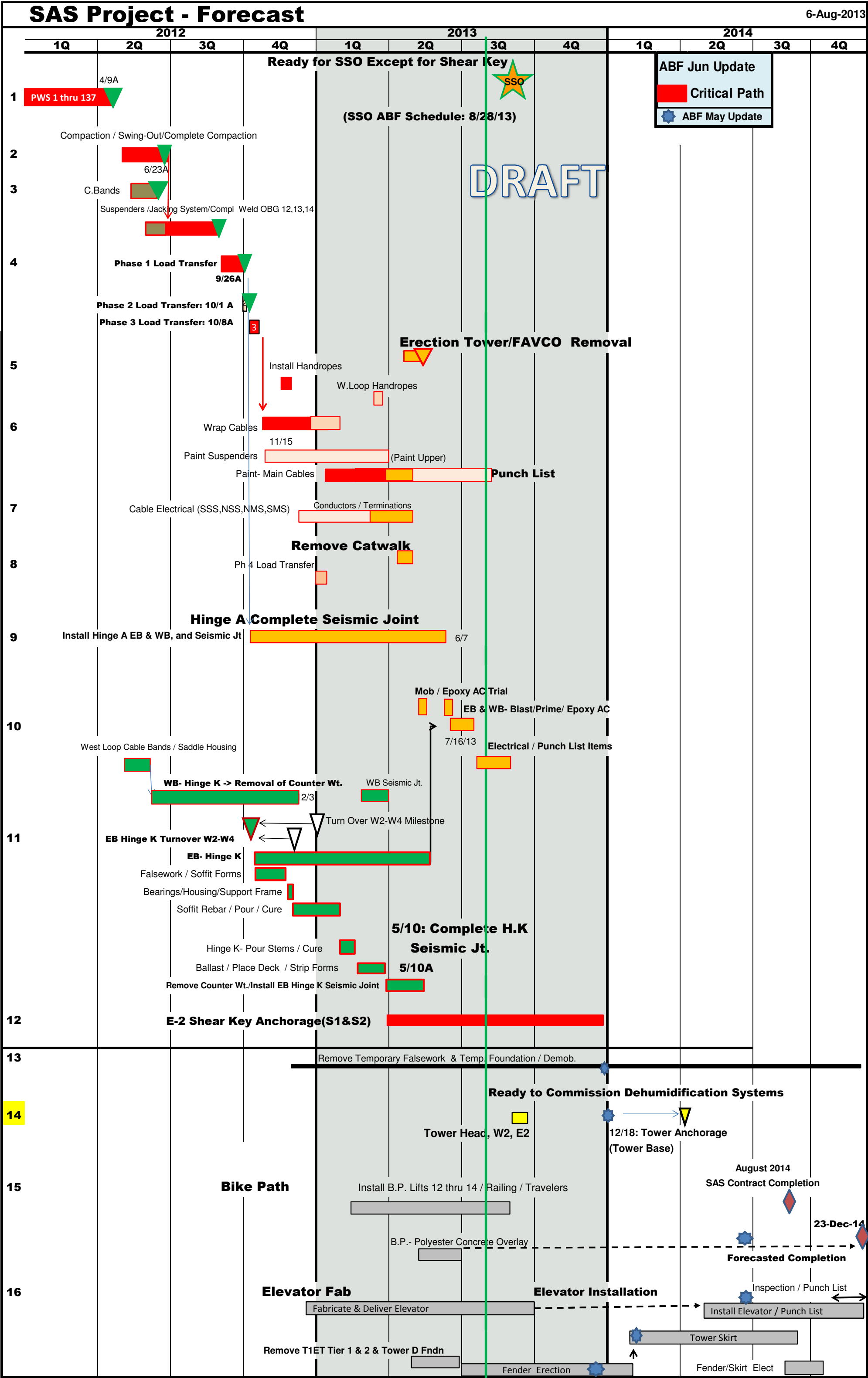
**Schedule Impacts:**

**Discussion:**

1. Status SAS E2 Shear Key Retrofit and Temporary Shims for Bearing Assemblies:
  - a. Completion of the E2 saddle retrofit is tracking to the 12/10/13 forecast. Saddle sections are scheduled to arrive at Pier 7 in multiple shipments beginning the last week of September through the middle of October 2013.
  - b. The temporary shims for the bearing assemblies have been fabricated and delivered to the pier. Installation of the temporary shims is pending TBPOC approval.
2. The overall SAS contract completion date is 8/24/14. The ABF June 2013 Schedule Update is trending a completion date of 12/23/14 due to fender change order work to widen the closure pour in the tower footing interface, which also controls construction of the tower skirt and dehumidification system in the tower base, and the installation of the elevator. Staff working with ABF to provide a workaround solution.
3. 504/288 Project: Due to construction work area restrictions, draft advertisement dates are now trending as follow:
  - a. Advertise                      3/3/14 (previously - 8/26/13)
  - b. Open Bid                      6/3/14 (previously - 11/26/13)
  - c. Contract Award              8/2/14 (previously - 1/25/14)

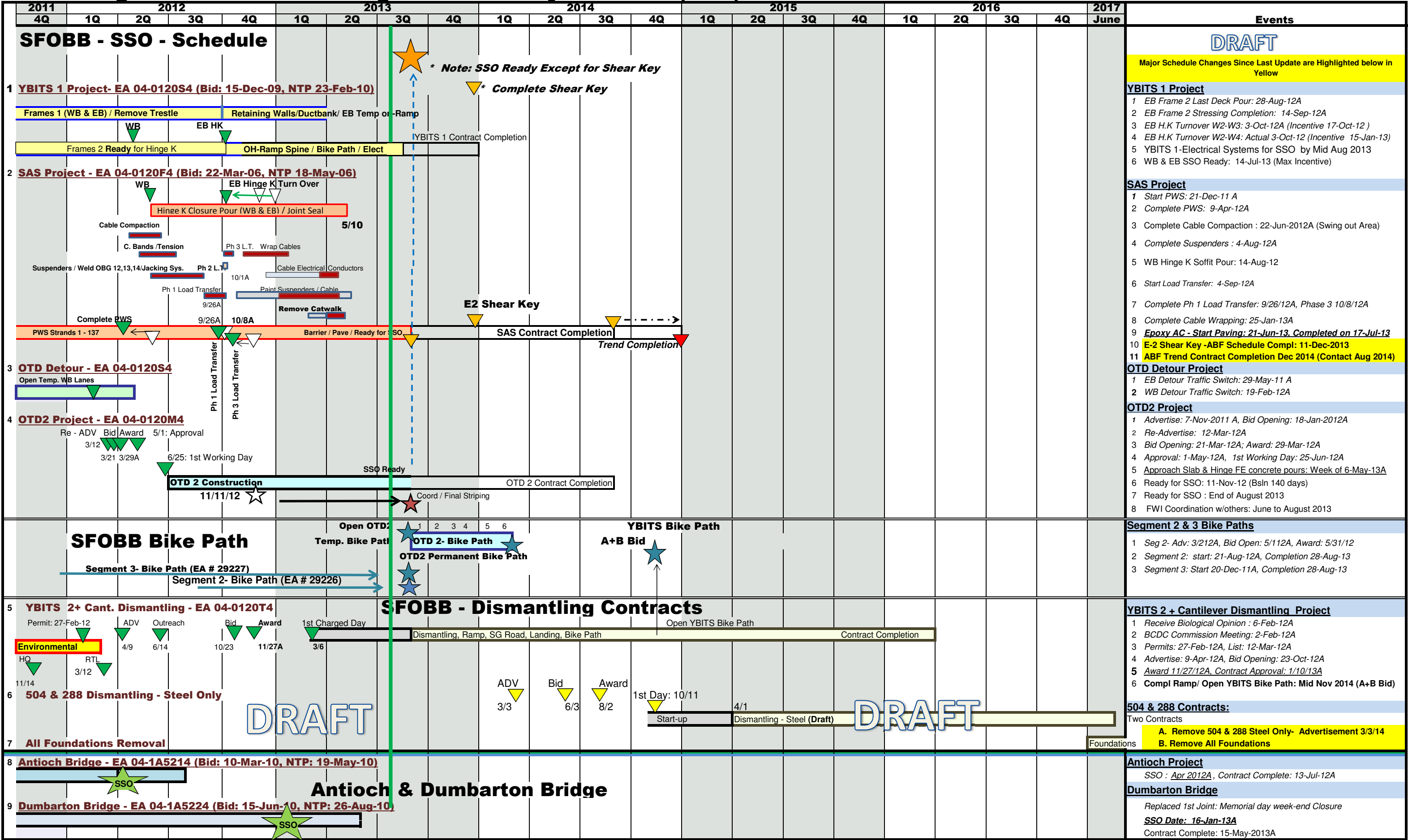
**Attachment(s):**

1. SAS Project Forecast – per ABF June 2013 Schedule
2. Toll Bridge Seismic Retrofit Program – Summary Schedule (SSO)



## **Toll Bridge Seismic Retrofit Program - Summary Schedule (SSO)**

3/6/2013



## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** August 7, 2013

**FR:** Bill Casey, Caltrans

**RE:** Agenda No. - 4c  
San Francisco-Oakland Bay Bridge Updates  
Item- E2 Update

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**Recommendation:**

For Information Only

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

Attached is the ABF E2 Saddle Fabrication – Daily Status Update, August 7, 2013.

E2 CCO and Testing Budget Updates are forthcoming items.

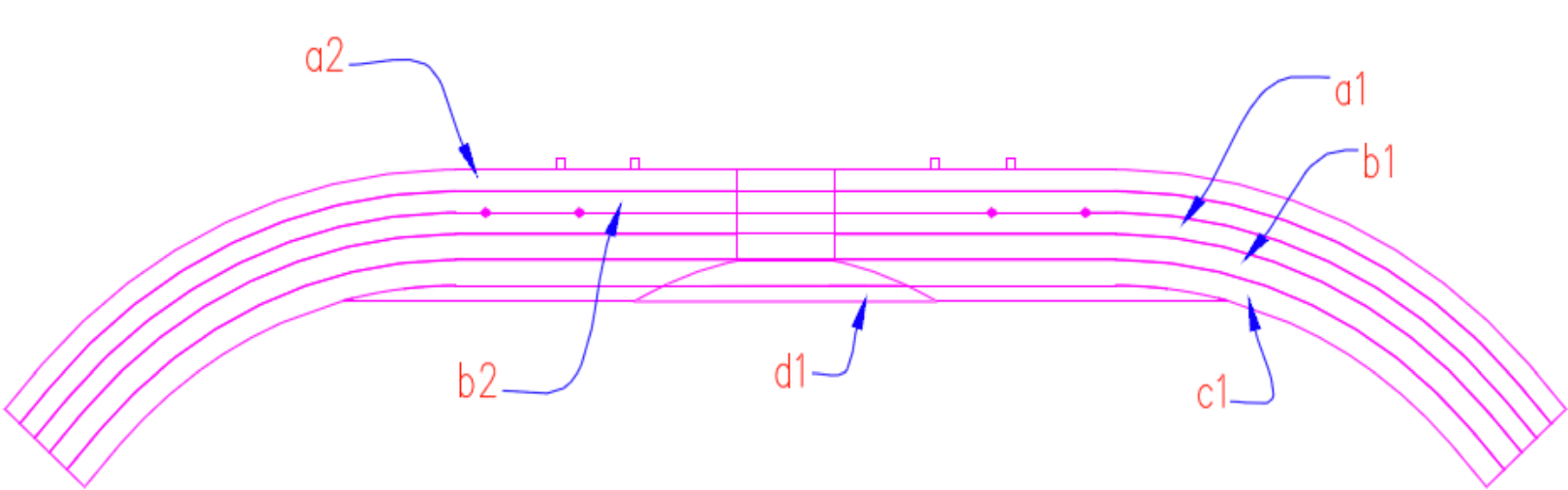
**Attachment(s):**

1. E2 Saddle Fabrication – Daily Status Update, August 7, 2013

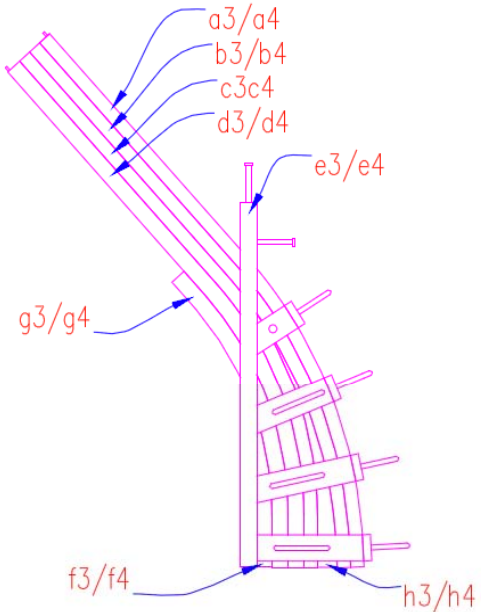
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11	WELDING
12	WELDING INSPECTION
13	SHIPPING
	HOLDING / WAITING / NO ACTIVITY



TYP UPPER SADDLE

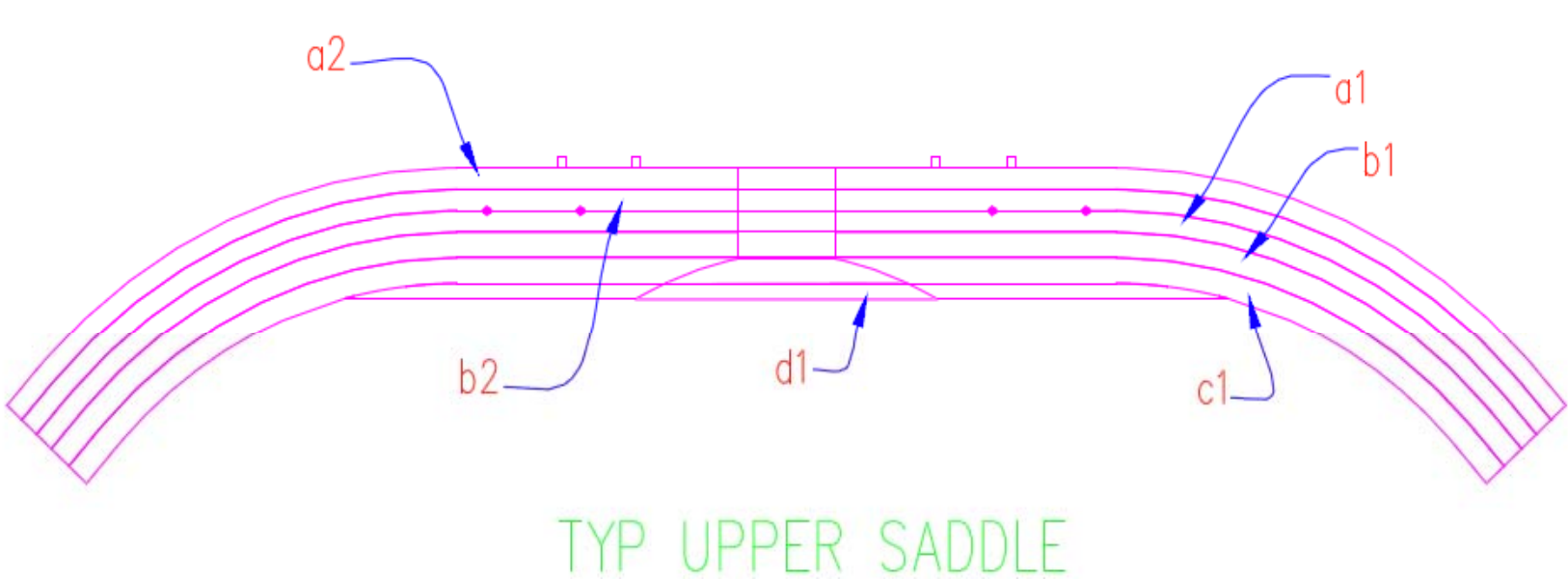


TYP LOWER SADDLE

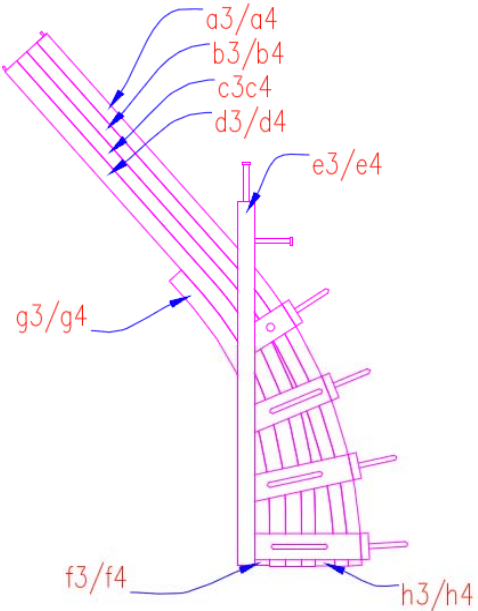
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13	SHIPPING
	HOLDING / WAITING / NO ACTIVITY



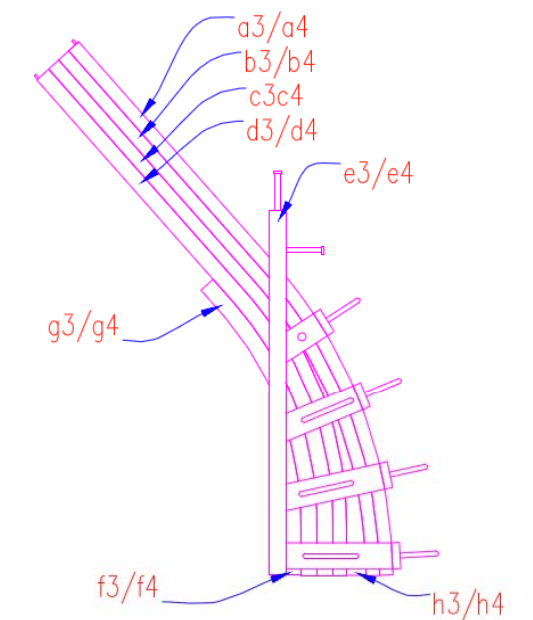
TYP UPPER SADDLE



TYP LOWER SADDLE

				6/17	6/18	6/19	6/20	6/21	6/22	6/23	6/24	6/25	6/26	6/27	6/28	6/29	6/30	7/1	7/2	7/3	7/4	7/5	7/6	7/7	7/8	7/9	7/10	7/11	7/12	7/13	7/14	7/15	7/16	7/17	7/18	7/19	7/20	7/21	7/22	7/23	7/24	7/25	7/26	7/27	7/28		
SMC	UPPER SADDLES	S10B	a1																							2	3	3	3	X	4	4	4	4	5	5	X						X				
			b1																								4	5	5	5	X	6	6	6	6			X	5	5	5	5	5	7	X		
			a2																								4	4	4	4	X			5	5	5			X					5	5	X	
			b2																	5	5	5	X	X	5	5	6	6	6	6	X	6	6					X	5	5	5	5	5	5	X		
			c1															5	5	5	5	5	X	X	5	5	8	5			X						X		8	8	8	8	8	8	X		
			d1																								5	5	5	5	X				4			X		8	8	8	8	8	8	X	
		S10C	a1																								2	2	3	3	X	3	3	3	3	3	3	X	3	3	3	3	3	4	X		
			b1																								2	4	5	5	X	5	6	6	6	6	6	X	6	6	6	6			X		
			a2																								3	4			X	5	5					X					5	5	X		
			b2																								5	4			X			5	5	5	6	X	6	6	6	6			X		
			c1													5	X	5	5	5	5	5	X	X	5	5	5	8		X						X		8	8	8	8	8	8	X			
	d1																									5	5			X		5			5	5	X	5	8	8	8	8	8	8	X		
	LOWER SADDLES	S3B	a3																								2	2	2	2	X		3	3	3	3	3	4	X	4	5	5	5	5		X	
			b3																								2	2	2	2	X	2	2	3	3	3	3	X	4	4	4	4	4	6	X		
			c3																								2	2	3	3	X	4	4	4	4	4	4	X	4	4	4	4	5	5	X		
			d3																								2	2	2	2	X	3	3	3	3	3	2	X	3	3	3	3	3	3	X		
			h3																								2	2	2	2	X	2	2	2	2	2	2	4	X	4	4	4	4	4	4	X	
			g3																								2	2	2	2	X	2	2	2	2	2	2	2	X	4	4	4	4	5	5	X	
			f3																								5	5	5	5	X							X		5	5	8	8	8	8	X	
			e3																								5	5	5	5	X							X	5	5	5	5	5	5	X		
			j3 (x2ea)																											X							X								X		
			k3 (x2ea)																											X							X								X		
			m3 (x2ea)																											X							X								X		
			p3 (x2ea)																											X							X								X		
			r3 (x4 ea)																											X							X								X		
		S4B	a4																									5	5	5	5	X	5	5	5	5	5	5	X	5	6	6	6	6	6	6	X
			b4																									3	2	4	4	X			5	5	5	6	X	6	6	6	6			X	
			c4																									2	2	3	3	X	4	4	4	4	4	4	X	4	5	5				X	
			d4																									2	2	2	2	X	3	3	3	3	3	3	X	3	3	3	3	3	3	X	
			h4																																												

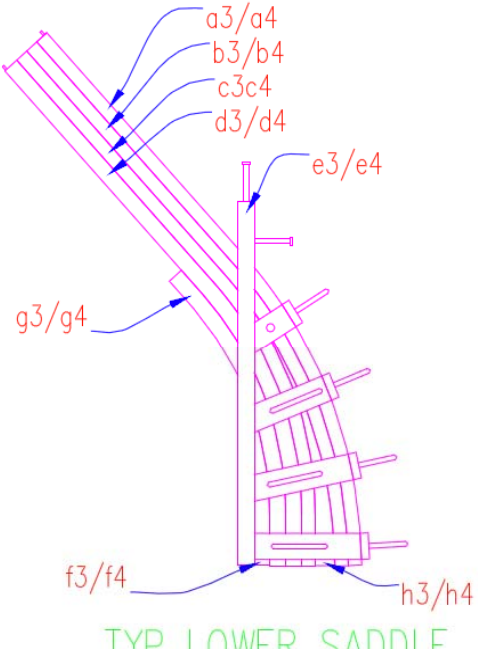
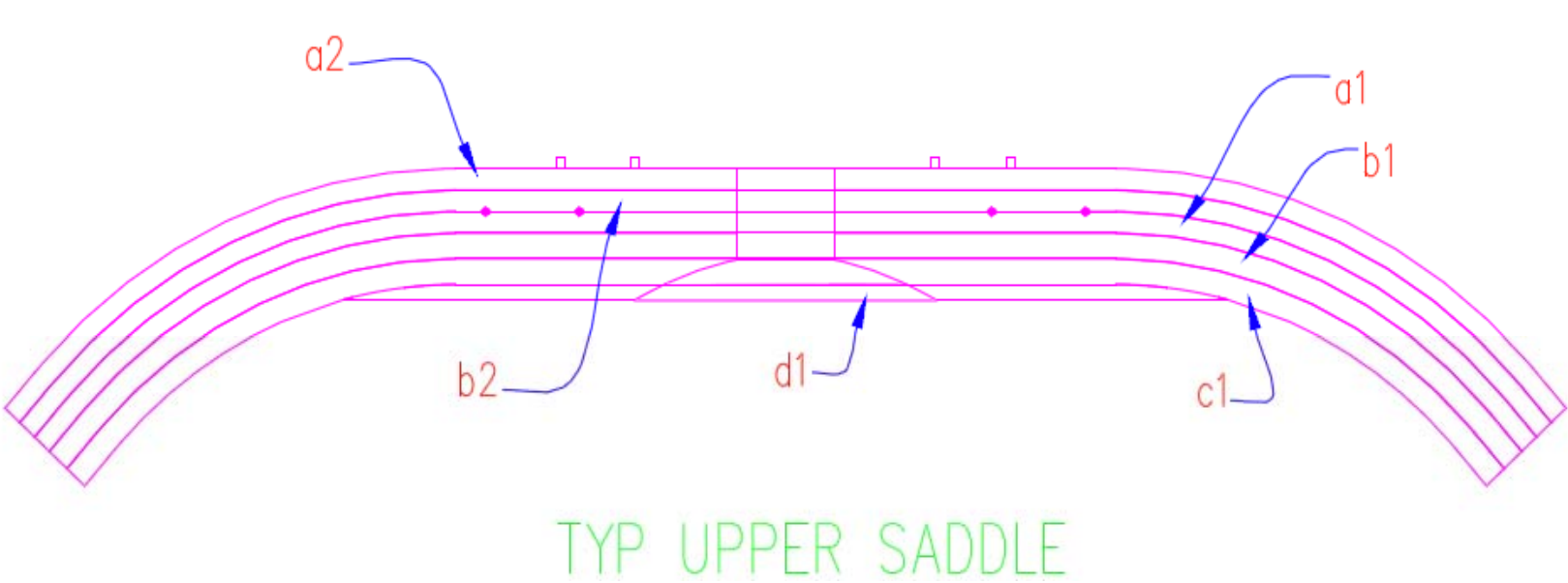
<b><u>FABRICATION TRACKING KEY</u></b>	
<b>1</b>	<b>CUTTING / WAITING TO CUT</b>
<b>2</b>	<b>FORMING / BENDING</b>
<b>3</b>	<b>FIT TO JIG / TEMP SUPPORTS</b>
<b>4</b>	<b>STRESS RELIEVING</b>
<b>5</b>	<b>MACHINING - PROFILE / RADIUS</b>
<b>6</b>	<b>MACHINING - TROUGH + KEYWAYS</b>
<b>7</b>	<b>MACHINING - INSPECTION</b>
<b>8</b>	<b>REMOVE JIG / TEMP SUPPORTS + CLEAN-UP</b>
<b>9</b>	<b>SURFACE PREP / BLAST</b>
<b>10</b>	<b>TRIAL ASSEMBLY</b>
<b>11</b>	<b>WELDING</b>
<b>12</b>	<b>WELDING INSPECTION</b>
<b>13</b>	<b>SHIPPING</b>
<b>14</b>	<b>HOLDING / WAITING / NO ACTIVITY</b>



				7/29	7/30	7/31	8/1	8/2	8/3	8/4	8/5	8/6	8/7	8/8	8/9	8/10	8/11	8/12	8/13	8/14	8/15	8/16	8/17	8/18	8/19	8/20	8/21	8/22	8/23	8/24	8/25	8/26	8/27	8/28	8/29	8/30	8/31	9/1	9/2	9/3	9/4	9/5	9/6	9/7	9/8			
SMC	UPPER SADDLES	S10B	a1							X																																						
			b1	8	8	8	8	7	7	X	7																																					
			a2	6	6	6	6	6	6	X	6	6																																				
			b2	5	5	5	5	8	8	X	8	8																																				
			c1	8	8	8	8	8	8	X	8	8																																				
			d1	8	8	8	8	8	8	X	8	8																																				
		S10C	a1	4	4	4	4	4	4	X	4	4																																				
			b1			5	5	5	5	X	5	5																																				
			a2	6	6	6	6	6	6	X	6	6																																				
			b2							X																																						
			c1	8	8	8	8	8	8	X	8	8																																				
			d1	8	8	8	8	8	8	X	8	8																																				
	LOWER SADDLES	S3B	a3	5	6	6	6	6	6	X	6	6																																				
			b3	6	6	6				X																																						
			c3		6	6	6	6	6	X	6	8																																				
			d3	4	4					X																																						
			h3	4	4	4	5	5	5	X	5	5																																				
			g3	5	5					X	5	5																																				
			f3	8	8	8	8	8	8	X	8	8																																				
			e3	5						X																																						
			j3 (x2ea)							X																																						
			k3 (x2ea)							X																																						
			m3 (x2ea)							X																																						
			p3 (x2ea)							X																																						
			r3 (x4 ea)							X																																						
																																	</															

				7/29	7/30	7/31	8/1	8/2	8/3	8/4	8/5	8/6	8/7	8/8	8/9	8/10	8/11	8/12	8/13	8/14	8/15	8/16	8/17	8/18	8/19	8/20	8/21	8/22	8/23	8/24	8/25	8/26	8/27	8/28	8/29	8/30	8/31	9/1	9/2	9/3	9/4	9/5	9/6	9/7	9/8		
SMC	LOWER SADDLES	S3C	a3	14	14	14	14	14	14	X	14	14																																			
			b3	4	4	4	5	6	6	X	6	6																																			
			c3	5	14	14	14	14	14	X	14	14																																			
			d3	4	4	4	4	4	4	X	4	4																																			
			h3	5	5	5	14	14	14	X	14	14																																			
			g3	4	4	5	5	14	14	X	14	14																																			
			f3	8	8	8	8	8	8	X	8	8																																			
			e3	5	14	14	5	5	5	X	14	14																																			
			j3 (x2ea)	14	14	14	14	14	14	X	14	14																																			
			k3 (x2ea)	14	14	14	14	14	14	X	14	14																																			
			m3 (x2ea)	14	14	14	14	14	14	X	14	14																																			
			p3 (x2ea)	14	14	14	14	14	14	X	14	14																																			
			r3 (x4 ea)	14	14	14	14	14	14	X	14	14																																			
		S4C	a4	8	8	8	8	7	7	X	7	14																																			
			b4	5	5	6	6	6	6	X	6	6																																			
			c4	14	14	14	14	14	14	X	14	14																																			
			d4	4	4	4	4	4	4	X	4	4																																			
			h4	4	4	4	4	4	4	X	4	4																																			
			g4	14	14	14	14	14	14	X	14	14																																			
			f4	5	5	8	8	8	8	X	8	8																																			
			e4	5	14	14	14	14	14	X	14	5																																			
			j4 (x2ea)	14	14	14	14	14	14	X	14	14																																			
			k4 (x2ea)	14	14	14	14	14	14	X	14	14																																			
			m4 (x2ea)	14	14	14	14	14	14	X	14	14																																			
			p4 (x2ea)	14	14	14	14	14	14	X	14	14																																			
			r4 (x4 ea)	14	14	14	14	14	14	X	14	14																																			

FABRICATION TRACKING KEY	
1	CUTTING / WAITING TO CUT
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9	SURFACE PREP / BLAST
10	TRIAL ASSEMBLY
11	WELDING
12	WELDING INSPECTION
13	SHIPPING
	HOLDING / WAITING / NO ACTIVITY



## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** August 10, 2013

**FR:** Bill Casey, Caltrans

**RE:** Agenda No. - 4c1 & 2  
San Francisco-Oakland Bay Bridge Updates  
Item- E2 CCO & Testing Budget Updates

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**Recommendation:**

For Information Only

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

Attached is the E2 CCO and Testing Budget Update tracking sheet for the TBPOC discussion on August 12.

**Attachment(s):**

1. E2 Shear Key Tracking, August 9, 2013



Updated 8/9/2013

E2 Shear Key S1/S2 CCO Tracking Status

CCO NO.	Description	Reference	Work Performed By	Method of Payment	Rough Order of Magnitude (ongoing discussions with ABFJV)	Engineer's Estimate 5/31/13	CCO Net Dollar Amount (Adds & Credits)	Date of TBPOC Approval	Executed Date	ABFJV Spent to Date/Committed Costs (Info. known as of 8/09/13)	Notes
Shear Key Anchorage Rod Replacment											
(Option C - Prestressed Post-Tensioned Concrete Steel Saddle Design)											
Field Work											
320	Temporary Bearing Shimming	Install steel shim plates between the temporary bearing foot and a temporary jacking lug welded to the temporary bearing base plate. (RFI 3242)	ABFJV	LS	\$ 100,000.00	\$ -	\$ 100,000.00	7/10/13		\$ 67,144.00	
325	Concrete Demolition	Concrete removal for saddles, construction joint surface prep. (bush hammering), construction joint keyway chipping, drill and bond dowel, mock up at Pier 7	Conco	EWFA	\$ 750,000.00	\$ 503,000.00	\$ 750,000.00	7/10/13		\$ 470,376.00	ABF est. costs based on timesheets to 8/4/13
329	E2 Shear Key Concrete	Forming, placing, curing, thermal control and finishing concrete. Includes creep testing for 1 year.	Conco	EWFA	\$ 1,300,000.00	\$ 1,616,000.00	\$ 1,300,000.00	7/10/13		\$ 1,164,074.00	Cost includes Conco quote to form, place, and finish concrete. Also includes the thermal control system.
326	Concrete Coring	Concrete coring , keyway saw cutting, water disposal , etc.	Penhall, Eco Bay, Rain For Rent	EWFA	\$ 500,000.00	\$ 189,000.00	\$ 500,000.00	7/10/13		\$ 400,000.00	Based on ABF estimates and projected sub costs.
327	ABFJV Field Work	All ABFJV Field work and subcontractor support, incl.: - Mob. and demob. access/falsework/platforms, etc. - Field work and subcontractor support - Survey, testing, and QC - Install steel saddle (set, grout into place, etc.) - Final field paint and touch-up - Bevel and Machine Shear Keys Base - Produce Steel Shop Drawings - Traveller Rail and Safety Rail Modifications	ABFJV, Finnoe Design, IPM	EWFA	\$ 4,940,000.00	\$ 1,305,000.00	\$ 3,400,000.00	7/10/13		\$ 2,864,244.00	ABF est. include access issues once the SAS is open to traffic (loss of OBG deck access, requirement to install an elevator to access E2 cap from the water, etc.)
327 S1		Additional Funds CCO					\$ 1,540,000.00				
328	Bar Reinforcing Steel	Furnish and place rebar	Harris Salinas	EWFA	\$ 1,000,000.00	\$ 844,000.00	\$ 675,000.00	7/10/13		\$ 938,396.00	Harris Salinas Revised Cost (7/3/13) includes a lump sum cost to furnish rebar and a labor estimate to install at force account.
							\$ 325,000.00				
330	Post Tensioning	Furnish strand/anchors, install, stress, grout, etc	Schwager Davis	EWFA	\$ 1,000,000.00	\$ 630,000.00	\$ 1,000,000.00	7/10/13		\$ 949,962.00	SDI quote. Revisions in progress with constructibility discussions (use of steel ducts, etc.)
331	Pier E2 Plan Sheets	Plan sheets for all Pier E2 Work (Zero Cost CCO - Repository for Plan Sheets)			\$ -		\$ -	7/10/13			CCO for plan sheet transmittal only, all other CCO's (scopes of work) refer back to this CCO
333	Pier E2 CCO Credit	Pier E2 Shear Key S1/S2 Work Credit - See CSR #3		L.S.	\$ -		\$ -				CCO Credit not applied to cost sheet
338	Bearing Shims	Furnish and Install steel shims at Bearings 1 - 4 in both long. and trans. directions.	Benecia, CCC, IPM, ABFJV	EWFA	\$ 250,000.00		\$ 250,000.00			\$ 114,618.00	Benecia is fabrication the shims.
337	Temporary Rods	Furnish and Install Temporary Rods at E2 (8 total rods for shear keys 3 & 4, and bearings 1-4)	Dyson, ABFJV	EWFA	\$ 160,000.00		\$ 160,000.00			\$ 25,446.00	Rods fabricated by Dyson.
Subtotal					\$ 10,000,000.00	\$ 5,087,000.00	\$ 10,000,000.00	\$ 6,994,260.00			
Fabrication Work											
313	Shear Key Materials	Procuring the necessary long lead time materials for Pier E2 Shear Keys 1 & 2 steel saddle.	Leeco, XKT Evraz	EWFA	\$ 1,500,000.00	\$ 1,500,000.00	\$ 1,500,000.00	7/10/13		\$ 1,491,907.00	Plate steel - EVRAZ, Leeco, XKT. Includes wedge plate and saddle tie plate material.
319	E2 Shear Key Fabrication	Fabricate steel saddle	XKT/SMC	EWFA	\$ 6,500,000.00	\$ 1,040,000.00	\$ 5,000,000.00	7/10/13		\$ 6,405,971.00	Includes both XKT and SMC quotes. Both quotes were relatively close in cost. Quotes are based on the June 28 <sup>th</sup> shop drawing revisions.
319 S1							\$ 1,500,000.00				
Subtotal					\$ 8,000,000.00	\$ 2,540,000.00	\$ 8,000,000.00	\$ 7,897,878.00			
Subtotal (Field Work & Fabrication)					\$ 18,000,000.00	\$ 7,627,000.00	\$ 18,000,000.00	\$ 14,892,138.00			
TBPOC Approved Expenditure (April 11 <sup>th</sup> , May 9 <sup>th</sup> , June 6 <sup>th</sup> , July 10 <sup>th</sup> , 2013)							\$ 18,000,000.00				
Remaining Funds from TBPOC Approved Expenditure (Contingency)							\$ -				

TBPOC Approvals: Shear Key Anchor Rod Replacement Soutlion: \$18 Million

Testing Program: \$ 1 Million

The Toll Bridge Project Oversight Committee (TBPOC) initially (April 11, 2013) approved \$4.3 million to continue work on the Shear Key S1 & S2 anchor rod replacement strategy solutions and to procure long lead time materials. The TBPOC revised this approval (May 9, 2013) to include all E2 shear key anchorage work within the approved \$4.3 million funding. At the June 6, 2013 TBPOC meeting the TBPOC further revised this approval to \$7.5 million. At the July 10, 2013 TBPOC meeting the TBPOC approved a revised budget of \$18 million for the E2 Shear Key Retrofit work.

The TBPOC at the May 9, 2013 meeting approved \$1 million for the anchor rods test program.

## *Memorandum*

**TO:** Toll Bridge Program Oversight Committee (TBPOC)      **DATE:** August 7, 2013

**FR:** Tony Anziano, Toll Bridge Program Manager, Caltrans

**RE:** Agenda No. - 4d  
San Francisco-Oakland Bay Bridge Updates  
Item- Risk Matrix

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**Recommendation:**

For Information Only

**Cost:**

N/A

**Schedule Impacts:**

N/A

**Discussion:**

This item is forthcoming.

**Attachment(s):**

N/A

## **ITEM 5: OTHER BUSINESS**

**No Attachments**